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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/817,610	04/02/2004	Sabrina L. Murray	STL11366	2451

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EXAMINER	
CYGAN, MICHAEL T	

ART UNIT	PAPER NUMBER
2855	

DATE MAILED: 09/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/817,610	MURRAY ET AL.	
	Examiner	Art Unit	
	Michael Cygan	2855	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 August 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-12,14-23,25 and 26* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-12,14-23,25 and 26* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *2 April 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 12, 14, 16, 18, 22, 23, 25, and 26 are rejected under 35 U.S.C. 102(b) as being anticipated by Kreisel (US 2,691,297). Kreisel discloses the claimed invention, an apparatus and method for performing leak testing of an telephone receiver (data storage device housing) with the apparatus, comprising pressurized air source [8], flow meter [12] in the flow stream, conduit (pipe [4], [5], [11]), standard reference orifice [25]; where the leak rate through test part is compared to that through the reference orifice to determine whether the test part has an acceptably low leak level (column 4 lines 60-67; Figure 3); the method further comprises use of the valve to divert flow to make the above described measurement, and comparison of the determined leak rate (ratio) to an acceptable value. Note that measurement of relative pressures via the manometer is a measurement of the relative flow rate of the gas. See entire document, especially column 2 line 30 through column 3 line 24.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

1. Claims 1, 2, 4-7, 10-12, 14-16, 18-20, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Docy (US 6,298,712) in view of Wickham (US 3,948,083). Docy teaches an apparatus and method for performing leak testing of an article with the apparatus, comprising pressurized air source [12], accumulator [16], flow meter [18], conduit (pipe from [36] to [26]), bleed orifice [22], regulator [14], valve [24], microprocessor controller [50] which compares the leak rate through test part and reference orifice to the leak rate only through the reference orifice to determine whether the test part has an acceptably low leak level (column 4 lines 60-67; Figure 3); the method further comprises use of the valve to divert flow to make the above described measurement, and comparison of the determined leak rate (ratio) to an acceptable value. Note that measurement of pressure of escaping gas over a specified time period is a measurement of the flow rate of the gas. See entire document, especially column 3 line 45 through column 5 line 10.

Docy teaches the claimed invention except for the use of a flow meter in the flow path of the flow of the pressurized fluid. Docy utilizes a pressure meter

having an opening in the flow path of the flow of the pressurized fluid; however, the claim language, as interpreted by the specification, requires that the flow pass through the flow meter (see applicant's specification page 7 lines 10-11 and page 8 line 19).

Wickham teaches the equivalence of in-line flow meters and pressure gauge/port meters for leak sensing of a test device [5] using a reference orifice [32]; see abstract, column 3 lines 53-56, and column 4 lines 26-31. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use a flow meter as taught by Wickham in the invention taught by Docy to replace the pressure sensor, since Wickham teaches that the flow meter has advantageous application in the leak sensing art in place of a pressure sensor.

With respect to claims 11 and 19, the claims are taught except for the particular leak magnitude range. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the claimed range, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

2. Claims 8, 9, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Docy (US 6,298,712) in view of Wickham (US 3,948,083) as applied to claims 1 and 16, further in view of Lindeberg (US 3,818,752). Docy teaches the claimed invention except the use of two

flow meters. Lindeberg teaches the use of two or more flow meters connected in parallel for use in a leak testing device; see column 2 lines 47-52. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use two or more flow meters connected in parallel as taught by Lindeberg in the invention taught by Docy, since Lindeberg teaches that such provides exact indication of the magnitude of any leakage (increased detection range); see column 2 lines 46-53. As Lindeberg teaches the use of flow meters based upon the desired flow rates to be sensed, it would have been obvious to use a flow meter having a mid-range point near that of a reference orifice leak, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

3. Claims 3 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Docy (US 6,298,712) in view of Wickham (US 3,948,083) as applied to claims 2 and 20, further in view of Ledeen (US 5,708,193). Docy teaches the claimed invention except for the use of a pressure regulator having a variable orifice size. Ledeen teaches the use of a pressure regulator having a variable orifice size for use in a leak test system having an accumulator; see Figure 5 and column 7 lines 21-60. It would have been obvious to one having ordinary skill in the art at the time

the invention was made to use a pressure regulator having a variable orifice size as taught by Ledeen in the invention taught by Docy to charge the accumulator, since Ledeen teaches such use as advantageous in properly and quickly charging an accumulator for pressure leak test systems.

4. Claims 23, 25, and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Docy (US 6,298,712) in view of Wickham (US 3,948,083) as applied to claim 14, further in view of Macpherson (US 1005/0036232 A1). Docy teaches the claimed invention except for the use of a data storage device as the tested unit. Macpherson teaches the use of a data storage device as a test unit for a leak test; see paragraph 0033. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use a data storage device as taught by Macpherson in the invention taught by Docy to form the tested unit, since Macpherson teaches the necessity of leak testing disc drives (paragraph 0033).

5. Claims 11 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kreisel (US 2,691,297). Kreisel teaches the claimed invention except for the particular leak magnitude range. It would have been obvious to one having ordinary skill in the art at the time the

invention was made to use the claimed range, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

Response to Arguments

Applicant's arguments filed 24 August 2006 have been fully considered but they are moot in view of the new grounds of rejection.

With respect to the rejection based upon Docy (here, in view of Wickham) in view of Ledeen, applicants argue that Docy's accumulator [16] is open to the atmosphere and thus would not benefit from proper and quick charging as offered by the regulator of Ledeen. However, Docy states that the operation of the system requires that the accumulator 16 be properly charged (e.g., to 36 inches of water) before leak measurement can begin; see column 3 line 65 through column 4 line 17. Since Docy's system requires pressure charging, it would benefit from regulable, quick charging as offered by the teaching of Ledeen.

With respect to the applicant's concerns over the range in the rejection based upon Docy (here, in view of Wickham) in view of Lindeberg, applicant's point that an artisan might not be motivated to choose a mid-range value is well taken; particularly in light of the application's claim of advantageous results on page 9, lines 4-6. However, applicant's specification further mentions that some flow meters "have been found to be generally more accurate in the mid-range;" page 9, lines 6-8. This appears to indicate

that one having ordinary skill would be familiar with the advantages of mid-range operation. Certainly, most persons of art would understand that operating a device within its operational range would be advisable, and that operation within the mid-range would advantageously ensure proper device function. Furthermore, applicants indicate that the mid-range operation flows naturally from the use of the bleed orifice; page 9, lines 1-4 of applicants' specification. Also, regarding applicants' argument that Lindberg's range is "significantly less precise" than the claims, the term "mid-range" is not defined with any precision in the specification.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Cygan whose telephone number is (571) 272-2175. The examiner can normally be reached on 8:30-6 M-Th, alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Lefkowitz can be reached on 571-272-2180. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MICHAEL CYGAN, PH.D.
PRIMARY EXAMINER